



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,901	04/26/2000	Martin G. Puryear	MS1-540US	1800
22801	7590	03/15/2005	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			TRAN, CON P	
			ART UNIT	PAPER NUMBER
			2644	
DATE MAILED: 03/15/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/559,901

Applicant(s)

PURYEAR, MARTIN G.

Examiner

Con P. Tran

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-31,33-36,44,45,47-49,51-53 and 59-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44,45,47-49 and 51-53 is/are allowed.
- 6) ☒ Claim(s) 28-31,33-36,59-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Allowable Subject Matter*

1. The indicated allowability of claim 32 is withdrawn in view of the previously cited reference to Shaw et al. U.S. Patent 5,815,689 (hereinafter, "Shaw"). Rejections based on the newly cited reference follow.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 28-31, 33-36, 59-69** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaw et al. U.S. Patent 5,815,689 (hereinafter, "Shaw").

Regarding **claim 28**, Shaw teaches a method and computer program product for synchronizing the processing of multiple data streams and matching disparate processing rates using a standardized clock mechanism in which interconnected kernel mode software drivers (col. 3, lines 55-60) allowing unlimited extensibility (col. 6, lines 20-23), comprising:

a presentation time portion indicating when audio data is to be rendered (Fig. 14, col. 37, lines 6-20);

a data portion (the buffer 224a-Fig. 11A) that can include audio data or a pointer to a chain of additional data structures (the component 220, and 210-Fig. 11A) that include the audio data; and

a flag portion (col. 5, line 55 – col. 6, line 2) indicating to a kernel-mode transform filter whether the data portion includes the pointer to the chain of additional data structures (col. 31, table 3). Shaw also discloses the flag portion includes event sets which indicating data starvation notification, etc., (col. 5, lines 65-67), e.g., too much data for renderer (296, Fig. 14) to process, the audio renderer 296 will eventually lose data due to finite buffering capabilities in a condition that is known as data “flooding” (col. 38, lines 22-33).

Shaw does not explicitly disclose wherein the event sets include an event incomplete flag that can be set to indicate that data identified in the data portion extends beyond a buffer pointed to by a pointer maintained in the data portion.

Nevertheless, it would have been well known in the art at the time the invention was made, those of ordinary skill in the art would be able to recognize renderer finite buffering capabilities by using indication that data identified in the data portion extends beyond a buffer pointed to by a pointer maintained in the data portion, to name and to set such data “flooding” as event incomplete flag.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a flag portion further include an event incomplete

Art Unit: 2644

flag as claimed for purpose of making adjustments to match the rendering rate at the renderer with the origination rate, as suggested by Shaw in column 38, lines 30-33.

Regarding **claim 29**, wherein the data structure further comprises a structure byte count portion (see file alignment, table 3, col.31) that identifies the size of the data structure.

Regarding **claim 30**, wherein the data structure further comprises an event (file alignment, table 3, col. 31) byte count portion that identifies a number of data bytes that are referred to in the data portion.

Regarding **claim 31**, wherein the data structure further comprises a channel group portion (the interface channel 226-Fig. 11A) that identifies which of a plurality of channel groups the data identified in the data portion corresponds to.

Regarding **claim 33**, wherein the data structure further comprises a byte position portion (see the boundary of file alignment, table 3, col. 31) including an identifier of where the data structure is situated among a plurality of data structures received from an application.

Regarding **claim 34**, wherein the data structure further comprises a next event portion (see col. 24-line 60 to col. 25-line 9) including an identifier of a next data structure in a chain of data structures.

Regarding **claim 35**, the data portion can further include a pointer to a data buffer (the data portion from the source 214 can include a pointer to the data buffer 224a-Fig. 11A);

and the flag portion indicates whether the data portion includes either the pointer to the chain of additional data structures or one of either the audio data or the pointer to the data buffer (see col. 16-line 66 to col. 17-line 8).

Regarding **claim 36**, the claim has similar limitations as claim 30. Therefore, it is rejected under Shaw for the same reasons set forth in the rejection of claim 30.

Regarding **claim 59**, Shaw teaches a method and computer program product for synchronizing the processing of multiple data streams and matching disparate processing rates using a standardized clock mechanism in which interconnected kernel mode software drivers (col. 3, lines 55-60) allowing unlimited extensibility (col. 6, lines 20-23), comprising:

a ConnectOutput interface (the interface 228-Fig.11A, col. 28, line 47- col. 29 line 11) to allow identification to the transform filter (the transform filter 220-Fig.11A) of a next transform filter (the identification of the filter 224a) in a transform filter graph (the

Art Unit: 2644

transform filter graph created by the controlling agent 170-Fig. 11B, col. 29, lines 47-49) to which audio data packets should be communicated by the transform filter (the audio data packets in the frame format, col. 29, lines 23-34); and

a PutMessage interface (the interface 230-Fig. 11A) to allow the audio data packets to be communicated to the next transform filter (the filter 224b, col. 28, line 47-col. 29 line 11).

a flag portion (col. 5, line 55 – col. 6, line 2) having event sets indicating data starvation notification, etc., (col. 5, lines 65-67), e.g., too much data for renderer (296, Fig. 14) to process, the audio renderer 296 will eventually lose data due to finite buffering capabilities in a condition that is known as data “flooding” (col. 38, lines 22-33).

Shaw does not explicitly disclose wherein each of the audio data packets includes a flag portion that includes an event incomplete flag that can be set to indicate that data identified in the data portion of the audio data packet extends beyond a buffer pointed to by a pointer maintained in the data portion.

Nevertheless, it would have been well known in the art at the time the invention was made, those of ordinary skill in the art would be able to recognize renderer finite buffering capabilities by using indication that data identified in the data portion extends beyond a buffer pointed to by a pointer maintained in the data portion, to name and to set such data “flooding” as event incomplete flag, and to have a flag portion that includes an event incomplete flag implement in an audio data packets.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have each of the audio data packets includes a flag portion that includes an event incomplete flag as claimed for purpose of making adjustments to match the rendering rate at the renderer with the origination rate, as suggested by Shaw in column 38, lines 30-33.

Regarding **claim 60**, wherein the transform filter further causes the one or more processors to implement a SetState interface to allow a state of the transform filter to be set, including a run state and a stop state (see col. 19, table 2).

Regarding **claim 61**, wherein the transform filter further causes the one or more processors to implement a DisconnectOutput interface (the interface 230-Fig. 11A) to allow a previously identified next transform filter to be changed.

Regarding **claim 62**, wherein the transform filter further causes the one or more processors to implement a SetParameters interface (the interface 228-Fig. 11A, col. 19, table 1-data intersection) to allow operational parameters of the transform filter to be set.

Regarding **claim 63**, wherein the transform filter further causes the one or more processors to implement a GetParameters filter to allow operational parameters previously sent to the transform filter to be retrieved (see col. 30-line 34-50).



Regarding **claim 64**, wherein the transform filter (the filter 244-Fig. 11B) further causes the one or more processors to implement a GetMessage interface to allow other transform filters (the buffers 224a-Fig. 11A) in the transform filter graph (the controlling agent 170-Fig. 11B) to obtain data structures for the audio data packets.

Regarding **claims 65-66**, wherein the transform filter (the component 220-Fig. 11A) further causes the one or more processors to implement a GetBufferSize interface (the interface 226-Fig. 11A) to allow other transform filters in the transform filter graph (the controlling agent 170-Fig. 11B) to obtain a size of data buffers (the buffer 224a) allocated by the transform filter.

Regarding **claim 67**, Shaw further teaches wherein the transform filter further causes the one or more processors to implement a PutBuffer interface (the interface 226-Fig. 11A) to allow other transform filters to return data buffers to a memory pool for re-allocation (allocation pool type, col. 33, line 61 –col. 34, line 9).

Regarding **claim 68**, Shaw teaches the computer-readable media as recited in claim 59. Shaw further teaches wherein the transform filter (244, Fig. 11B; col. 29, lines 23-34) comprises a sequencer filter (pin instance 242, 250, Fig. 11B; 154, 158, Fig. 7; col. 29, lines 23-43; 27, lines 42-48) to reorder the audio data packets by

Art Unit: 2644

timestamp (col. 23, lines 7-19; col. 37, lines 6-22); and to delay forwarding the audio packets to the next transform filter until an appropriate time (col. 46, lines 61-65).

Regarding **claim 69**, Shaw teaches the computer-readable media as recited in claim 59, wherein the transform filter (244, Fig. 11B; col. 29, lines 23-34) comprises an allocator filter (buffer allocator 268, Fig. 12) to obtain memory from a memory manager and make portions of the obtained memory available to other transform filters (col. 35, lines 4-12).

#### ***Response to Amendment***

4. With respect to objection to the specification, the correction has been made. Accordingly, the objection to the specification is withdrawn.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 28-31, 33-36, 59--69 have been considered but are moot in view of the new grounds of rejection.

#### ***Allowable Subject Matter***

6. **Claims 44-45, 47-49, and 51-53** are allowed.

As to **claim 44**, the allowable subject matter of 50 has been incorporated into claim 44. Accordingly, claim 44 is allowed.

As to **claim 48**, the allowable subject matter of dependent claim 50 has been incorporated into claim 48. Accordingly, claim 48 is allowed.

**Claims 45 and 47** are allowed by virtue of their dependency on claim 44.

**Claims 49, and 51-53** are allowed by virtue of their dependency on claim 48.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Con P. Tran whose telephone number is (703) 305-2341, or effective March 24, 2005, a new telephone number (571) 272-7532 will be assigned to the examiner due to moving to new location. The examiner can normally be reached on M - F (8:30 AM - 5:00 PM).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Sinh N. Tran can be reached on (703) 305-4040, or effective March 24, 2005, on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2644

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CPT CPJ  
February 4, 2005



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**